

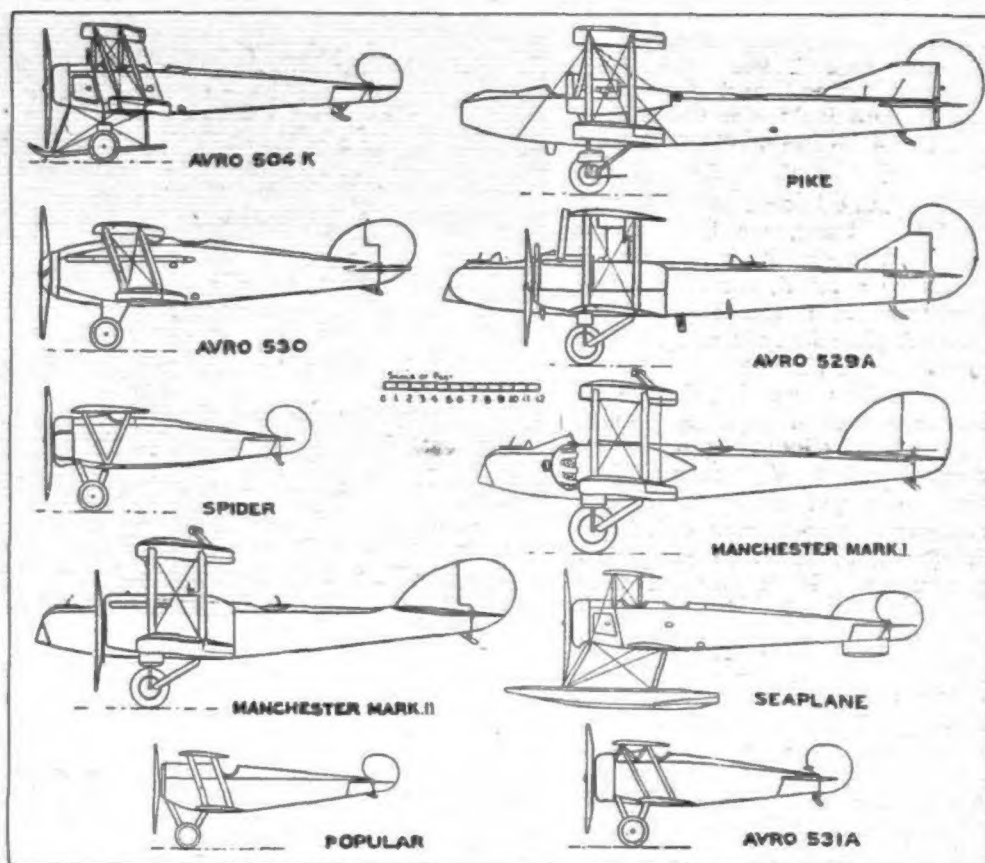
Avro productions of the war period. These side elevations, all to a uniform scale, are reproduced from *Flight* of March 20, 1919.

ENTURY

The Story Behind the Name of a Pioneer Aircraft Firm which this Week Celebrates Its Twenty-fifth Birthday: Some Outstanding Avro Aeroplanes Recalled and Reviewed

During the early years of the War the 504 was used for many duties, including bombing of the Zeppelin sheds at Friedrichshafen. As the years went by the difficulty of training pilots increased, and by early 1917 it had become serious. What later became famous as the "Gosport system" of training was introduced by Col. Smith-Barry, and the Avro 504 J (100 h.p. Gnome monosoupape) was chosen as the standard training type. Later the machine was fitted with the 110 h.p. le Rhone rotary, and the still more powerful Clerget of 130 h.p. With these engines the type became known as the 504 K. Later, several other versions were to follow.

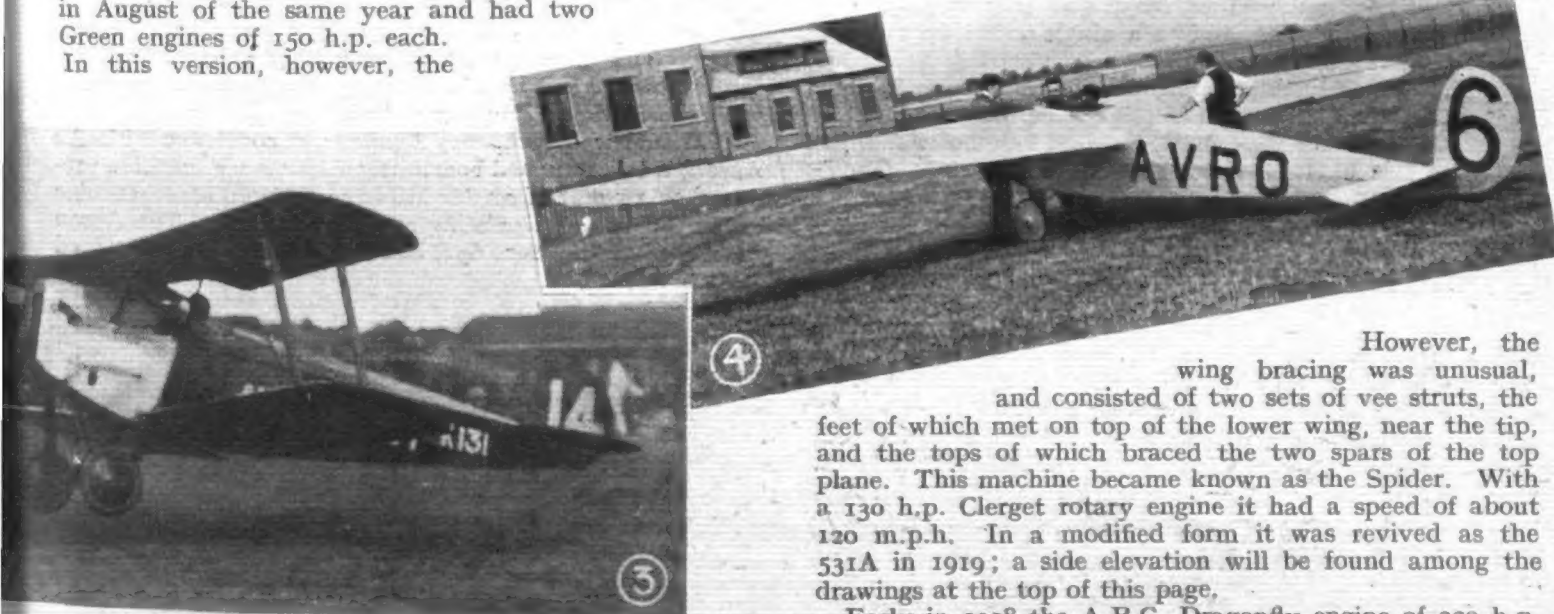
Although the company had to concentrate on the production of the 504 K, they found time to design and build a considerable number of other types during the war. For instance, there was the Pike, the series number of which was the 529. Appearing in May, 1916, it was the first twin-engined machine produced by the firm. It was fitted with two Sunbeam engines of 160 h.p. each, which drove pusher airscrews. A second machine came out in August of the same year and had two Green engines of 150 h.p. each. In this version, however, the



airscrews were in front of the wings. A two-seater fighter with 200 h.p. Sunbeam Arab water-cooled engine appeared in July, 1917. Known as the 530, this machine had a top speed of 118 m.p.h. The crew were seated high, looking over the top wing, and the raised top decking gave a very "modern" air.

Going through the shops at the same time as the 530 was a twin-engined three-seater bomber, the 529A, which was fitted with two Galloway B.H.P. engines of 220 h.p. each. The speed was 116 m.p.h. and the military load 1,280 lb.

Of totally different type was the little single-seater scout which was brought out early in 1918. With a lower wing of very small chord, the 531 was slightly reminiscent of the French Nieuport scouts.



However, the wing bracing was unusual, and consisted of two sets of vee struts, the feet of which met on top of the lower wing, near the tip, and the tops of which braced the two spars of the top plane. This machine became known as the Spider. With a 130 h.p. Clerget rotary engine it had a speed of about 120 m.p.h. In a modified form it was revived as the 531A in 1919; a side elevation will be found among the drawings at the top of this page.

Early in 1918 the A.B.C. Dragonfly engine of 320 h.p. was beginning to go into production, and a twin-engined machine was designed for it. This became known as the Manchester. As the engines could not be obtained, a modified version, the Manchester Mark II, was produced fitted with two Siddeley Puma engines of about 300 h.p. each. In the Manchester the designer, Mr. Roy Chadwick (of whom more anon) used the type of aileron balance which

(1) The original 504 with 80 h.p. Gnome rotary engine, (2) a take-off "under the hood" by a 504N, piloted by Mr. W. E. P. Johnson. (3) The Avro Baby (35 h.p. Green) appeared in the spring of 1919 and was thus the first accepted "light plane." (4) The Avro ultra-light monoplane on which Bert Hinkler covered 1,000 miles in the Lympne week of 1923. (Flight photographs.)